

IN THE CLAIMS:

1. (Previously Presented) A wireless base station that wirelessly communicates with a plurality of mobile stations via an antenna by using space division multiplexing (SDM), each mobile station sending communication data containing an identifier (ID) to the wireless base station, comprising:

association information storing means for storing association information that associates each of the plurality of mobile stations with a different ID;

receiving means for receiving data into which communication data sent from the plurality of mobile stations is space-division multiplexed; and

extracting means for extracting, from the received data, communication data sent from the mobile station, the extraction being performed by (i) specifying an ID associated with each mobile station by referring to the association information, (ii) defining a reference signal containing the specified ID, (iii) obtaining, from first signals that have been sequentially received via the antenna by forming a directivity pattern, a second signal estimated to be related to the communication data, (iv) sequentially performing a calculation based on the second signal and the reference signal, (v) sequentially adjusting the directivity pattern by reflecting a result of the calculation, and (vi) obtaining data based on the second signal.

*Please
enter
in*